

## FURTHER EXCAVATIONS ON A PALÆOLITHIC SITE IN IPSWICH.

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[WITH PLATES XIX, XX.]

At the Meeting of the British Association held in Belfast in September, 1902, I exhibited Palæolithic implements from the brick-earth of Ipswich. (*Cf. Journ. Anthr. Inst.*, vol. xxxiii, p. 41.)

As the pit from which they were taken was at that time being worked for clay, and a large number of men were employed, it was impossible to make accurate observations either with regard to geological conditions, or the precise position in which each flint was found.

With a view to a more thorough examination of the site, I invited the co-operation of a Committee in October last, in connection with the Ipswich Museum, the Ipswich Scientific Society, and others, to arrange special excavations for this purpose. Sir John Evans, who kindly consented to allow his name to be on the Committee, has visited the spot and given most valuable assistance and advice.

The pit is situated on a plateau above the town of Ipswich, a slight depression only indicating the position of an ancient valley which appears to have been cut through boulder clay, and since silted up.

We commenced our work by marking out an area measuring 10 yards by 6, and working from the top down to the implement-bearing bed.

Two workmen were employed under my own daily supervision, and the depth and position of almost every flint found was measured and marked.

After working for a fortnight, we struck our first Palæolithic implement at a depth of  $9\frac{1}{2}$  feet. This was a well-worked oval flint in sandy clay. I had the block containing it cut out, so that the flint may be seen in the matrix.

Although it had been noticed before that the implements in this pit were found at levels varying in depth from 8 to  $12\frac{1}{2}$  feet, I only ascertained by working regularly from west to east, that they were in reality all on the same floor, which gradually rose several feet from what appeared to be the bed of a former river or pool, now represented by the sedimentary deposits with which it was afterwards filled, so that, while in the south-west corner the flints were  $12\frac{1}{2}$  feet below the surface, they were discovered at ever higher levels as we worked eastward. This raises the question as to whether in other similar pits in East Anglia, where the implements are described as scattered up and down throughout a section, they



are not in some cases lying on an undulating floor, where they were all left at approximately the same period.

In the Ipswich pit, a thin line of iron stain marked out the position of the implement-bearing bed in the clay, and, guided by that, we were able to trace what appeared to be the old land surface with tolerable precision. The flints were always found immediately below the stain in the clay, and following this we came to a small bank of gravel also containing flints. During our two months' search, forty implements came to light, besides many other flints showing human work.

Only in one instance was a tool found lying directly above another, and it is certainly puzzling to know how it came into this position. I found it myself in the gravel, 5 feet above the bed of clay which contained the oval implements. This specimen is a well-worked ovate form, resembling in shape those found in the clay below, but coloured like the gravel in which it lay. It has a somewhat glossy patina.<sup>1</sup>

I also found a ridged flake only  $3\frac{1}{2}$  feet from the surface, but with these exceptions all the tools occurred in the same stratum.

The implements showed considerable diversity of form, and it was noticed that the oval and ovate sharp-rimmed tools were embedded in compact clay, while the gravels which sloped down to the clay contained a large number of tools of many other shapes, and the somewhat more sandy clay, in the south-west corner, produced one or two other varieties, among them an elegant pointed implement with good patination. (Plate XIX, Fig. 2.)

It has been suggested that the oval tools were washed out of the higher gravels into the position in which they were found, but against this view is the fact that there were no unworked pebbles with them, which would inevitably have been the case if a flow of water had brought them down. Whenever we found a flint in this compact brick-earth, it was always an implement. The sorting power of water is well known, but it is expecting too much of it to believe that all the oval flints were selected from among the many other forms, and laid together in one place. The flints show no signs of rolling, and the edges are as keen as when they were first made. Three beautiful specimens which were lying close together are almost exactly similar, and were evidently the work of the same hand, which certainly suggests that they were either purposely flung into the water, or left on the spot by their owner. One of these happened to be found when Sir John Evans was visiting the pit with me, and again I had the block cut out containing the tool. The ogee curve is remarkably pronounced in them. (Plate XIX, Fig. 3.)<sup>2</sup>

<sup>1</sup> Since the above was written I have been able to trace the connection between the upper and lower gravels, from which I conclude that these implements are of the same date as those found in and below the clay.

<sup>2</sup> Later excavations on the same site convince me that these tools are derived from the gravels above. Probably the sharp rims of these oval implements caused them to work more readily into the clay.



It is noticeable that the implements found in the clay, although at such a great depth, are almost entirely without patination. This tendency to "retain their original colour in impervious clay" is mentioned by Sir John Evans, in his work on *Ancient Stone Implements*.

The thick ochreous and glossy patina for which some of the earlier flints found in other parts of this pit were remarkable, is absent from those more recently discovered, and I had hoped, by coming upon an example of these highly coloured specimens *in situ*, that we should have been able to connect their condition with the medium in which they were buried. Only one resembling these was found, however, and that was under the grass on the surface, where it must have been thrown out when the older part of the pit was in working.

Among the tools from the gravel (which vary greatly in form) is a minute, delicately worked implement, which appears to have been made in imitation of a larger-pointed weapon. This has been described as a toy tool, made for a Palaeolithic child. (Plate XX, Fig. 2.) Such tools are rarely found in England, but have been recognised on the Continent. It may, however, be a small spear-head, the forerunner of the Neolithic arrow-head, though the finding of an equally minute copy of an ovate implement is against this explanation. In order to give some idea of its comparative size, I have placed it beside a large pointed implement found at the same level, though not in the same pit. (Plate XX, Fig. 1.) An implement of quite unique pattern, also from the gravel, is shown in Plate XIX, Fig. 1. It may be described as a cutting tool with a concave edge.

Two small-pointed implements were found lying point to point close together in sandy clay, while beside them was a small oval tool.

There is no doubt that a large number of the rougher tools would have been unnoticed by the workmen, and carted away with the gravel, unless their work had been minutely watched. Certainly the numerous flints showing human work, though not wrought with sufficient care to be dignified with the name of tools, would have escaped observation altogether. Some, of the roughest possible description, were found side by side with those most highly finished.

The only other remains found were fragments of the teeth and tusks of elephant, rhinoceros, ox and deer, but these were  $2\frac{1}{2}$  feet below the implements in coarse gravel. Below this again in the underlying clay were blackened thread-like fibres, which appeared to be the rootlets of plants, probably water-plants.

From the lowest point at which implements were found, namely,  $12\frac{1}{2}$  feet from the surface, we took a boring to discover the relative position of the chalky boulder clay. Passing through alternate beds consisting of white-earth clay, gravelly sand, white-earth clay again, yellow clay, loamy gravel, and strong brown clay, we at length touched the chalky boulder clay, which was from  $14\frac{1}{2}$  to 15 feet below the flint-bearing bed. Into this we penetrated 4 feet, but did



not succeed in getting through it. (Fig. 1.) Our work did not extend far enough to enable us to trace the sides of the valley, but future borings may satisfactorily determine whether we shall here also find the boulder clay.

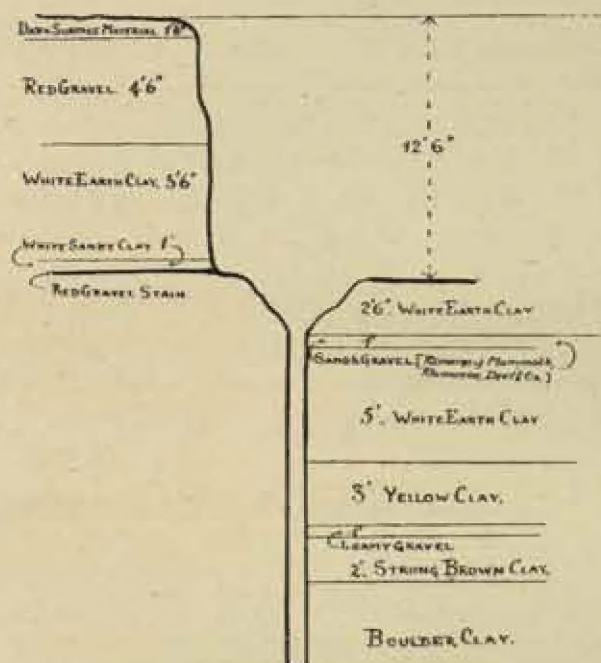


FIG. 1.—SECTION OF PIT AND BORING.

picked up in the wet clay, stained the fingers a bright red, suggesting the use to which it might have been put. I have also found in the adjacent boulder clay, in another part of the pit, fossils, such as *Gryphæa incurva* from the Lias, Belemnites from the chalk, volcanic tuff, and last, but not least, a small piece of oolite, which is interesting as demonstrating the transporting agency of ice. This appears to be proved by the fact that on one side the tiny roe-like lumps are rubbed down till a perfect cross section is seen, revealing the nucleus of quartz sand, while on the other side the roe-like appearance has not been interfered with. It is difficult to conceive of any other agent by which this fragment could have been brought from the great distance at which oolite is found, without its turning over, and becoming rolled and rubbed down on all sides. It must have been packed firmly in the ice, to have arrived in this condition.

Our recent researches appear to suggest:—

- (1) That the flints are within a short distance of their original position.
- (2) That the difference of level at which they were found, does not prove that they were laid down at different periods, but was caused sometimes by the irregularity of the old surface.

Among the implements are a few made from flints the chalky crusts of which show what appear to be glacial scratchings, and these tend to confirm their Post-glacial origin.

A lump of red chalk embedded in what appeared to be boulder-clay, must have travelled a long way before it reached Ipswich,<sup>1</sup> and may have been washed out of the side of the boulder clay valley. This was beside the animal remains.

Red ochre, which I also found, has been recognised before in caves inhabited by Palæolithic man. This, when

<sup>1</sup> Probably from Hunstanton.

- (3) That the animal remains were  $2\frac{1}{2}$  feet below the Palaeolithic bed.
- (4) That compact white clay does not produce patination.
- (5) That this colony of Palaeolithic men was apparently Post-glacial.<sup>1</sup>

The flints found during this last excavation are the property of the Ipswich Museum.

*Explanation of Plates.*

Plate XIX, Fig. 1. Cutting tool with concave edge.

" " 2. Elegant pointed instrument.

" " 3. Ovate implement with ogival curve.

Plate XX, Fig. 1. Large Palaeolithic hatchet.

" " 2. Supposed toy tool.

<sup>1</sup> As the excavation is still being continued, these notes are merely a diary of observations made at the time, and are subject to future correction.





FIG. 1. 1.



FIG. 2. 1.



FIG. 3. 1.

FURTHER EXCAVATIONS ON A PALEOLITHIC SITE AT IPSWICH.







FIG. 1. †



FIG. 2. †



